

Vegetable Garden Workshop

Presented By:



Location Selection

Sun Exposure

- 8 or more hours of sunlight is ideal throughout the growing season. Using the arc of the sun at the equinox is a good indicator.
- Prioritize morning light over evening light (SE exposure is preferable to SW exposure)

Wind Exposure

- Open areas can be more susceptible to damage from high winds during storms. They also have a tendency to frost earlier than more sheltered areas.

Proximity to Trees

- Try not to plant within the drip line of a tree. Roots will make their way into the garden no matter how many times you cut them off. Take into account that existing trees will grow. Allow some leeway when positioning your garden.

Convenience

- One of the most important factors that is sometimes overlooked.
- Try to position the garden near the house if possible, this will naturally increase your interaction with the garden. You will become more in tune with it and can notice any potential issues earlier. You will also be more inclined to enjoy what you are growing to its full potential (such as a last minute salad to accompany dinner, or some fresh herbs to garnish a dish).

Garden Size

When it comes to determining the size of a garden there are many things to consider. The best sized garden is 'right sized garden'. Planting a large garden is great if you are able to give it the attention that it needs. If you cannot it may quickly become a patch of weeds and stunted plants. A well tended smaller garden may in fact be more productive and will be infinitely more rewarding.

When in doubt start smaller, with a plan for where you can expand next season. Also as you grow more comfortable in the garden you will become faster at some of the maintenance as it becomes second nature.

Also consider what your short and long term goals are. Start with modest short term goals. Big long term goals are great to work towards, but don't expect to become fully self sufficient in your first couple of years. Take the time to figure out a balance that works for you and some of the intricacies of your particular garden.

Garden Types

In-ground

Pros

- Typically Cheaper
- More suitable for large garden beds

Cons

- Often more work to maintain

How to get started:

Ideally start the season before you want to plant by covering the area with a tarp to kill all the existing vegetation. This can then be turned into the soil either in the spring or fall where it will further decompose.

Alternatively you can till or dig in grass where you want your bed. You may have to do this a few times in conjunction with removing clumps of grass to get a good plantable area. Digging out sod will work as well to remove weeds/grass roots, and unwanted weed seeds, but you will lose soil depth in the process.

In conjunction with either of these methods a technique known as 'Lasagne Gardening' can be used. It involves layering cardboard/newspaper/kraft paper as a base layer to block grow through (wet down as you go to keep it from blowing away). Then add a layer of mulched leaves, small sticks, and other organics, topped by a layer of soil for planting. The thicker you make your layers the less other preparations you will need to do.

Depending on depth and soil quality you should be prepared to amend with either well composted manure (in cases of good soil depth), or a mixture of manure and garden soil where there is shallow soil depth.

Raised Beds

Pros

- Lower maintenance
- Can be constructed with salvaged materials (try to avoid anything treated), or logs from deadfalls or any tree work
- Often have higher yields per square foot
- Can be set up in areas with poorer soil
- Can be built into/on slopes

Cons

- Typically more expensive
- Can be more labour intensive to set up

How to get started:

Measure out and mark area where you want the beds. 4' wide is an ideal width for beds as you can reach into them without stepping in and compacting the soil. Make them as long as you want from 4' to 32',

The depth of the beds is up to you. 12" to 16" is typically a good depth. You can go deeper if putting on top of poor soil, or shallower on top of good soil. This will also depend on the amount of material you have on hand or have budget to buy.

When constructing beds make sure you have very strong corners, as this is often the first spot that will fail. Also ensure that on longer beds cross brace them every 8'-10' to prevent them from bowing out.

To prevent weed and grass grow through at the bottom of your beds put down several layers of untreated kraft paper (extending out past the edges of the bed). This will stop the weed growth long enough to kill them, but will also break down fairly quickly, allowing you plant roots to grow deeply. DO NOT use landscaping fabric to line insides of beds.

Fill with suitable garden soil (a ramp as simple as a piece of 2"x8" lumber will make this go much easier) and start planting!

Pots

Pros

- Easy to set up and relatively inexpensive for small scale
- Works well in small spaces

Cons

- Very prone to drying out
- Hard to grow an appreciable quantity of vegetables

How to get started:

There isn't too much to it. Get some pots (Larger is better), some potting soil and seeds/plants. Tall and climbing plants will need to be staked or caged. Be careful where you situate them so they don't get too hot. Putting them on a patio near a south facing wall in the middle of summer can cause the plants a lot of stress. Salad greens can be particularly sensitive to heat, especially soil temperature and can benefit from some amount of shade through the afternoon.

Soil Selection for your Garden

This is a very important consideration. If buying soil by the yard talk to the supplier and explain what you are doing and they can help you select an appropriate soil. Choose something high in organic matter. If you are purchasing manure, ensure that it is well composted, and generally free of weed seeds. Make sure you are bringing quality materials into your garden as if you introduce a lot of weeds they may take a large amount of effort to remove.

Plant Selection and Planning

The best plants to put in a garden are the ones that you want to eat! Ideally with fruiting plants (ones that require pollination) try to grow at least a couple of each type to increase pollination and fruit set.

Take a look at your seed packets for plant/row spacing and make a to scale garden plan on some grid paper to get a sense of what you can fit.

Depending on personal tastes these are some general recommendations for aims for different garden sizes.

Small Size – focus on fresh eating

Plant a salad garden (several varieties of greens) with fresh herbs, cherry tomatoes, pole beans and cucumbers (pickling/snack size or full sized), a couple rows of carrots and other root veggies. Cherry tomatoes typically mature first, produce all season long and are extremely versatile. In addition they can be grown vertically on the north side of the garden (like beans and cucumbers) as an efficient use of space. Succession planting greens will supply a steady stream of salad for fresh eating. Nothing compares to fresh herbs when you are cooking. You can grow a lot of flavour in a small space.

Medium Size – Increased fresh harvest with some storage

Expand on the small garden idea. Plant a few more rows of root vegetables, any that you don't eat will store well in the fridge for fall/early winter consumption. Grow a few slicing tomatoes, zucchini,

squash (if you have space/you can grow this over your lawn). Experiment with peppers and eggplants (try to select earlier varieties). Any extra you grow will easily find use in your community.

Large Size – Broad range of plants and significant storage crop

With a large garden you will often be able to grow significantly more than you can eat fresh. You can experiment with multiple varieties of different vegetables. You can also do specific plantings for canning or other preserving. Planting plenty of root vegetables, squashes and pumpkins can keep you eating garden vegetables well into the winter. You will often find that with some crops you will have an overabundance that can be shared in the community.

Getting the most out of your garden space

Some tip and tricks

- Squash can be grown into the lawn on raised beds or In-ground garden
- Zucchini grown in corners of raised beds to they spill out.
- Beans, and cucumbers can be grown vertically to save on space (trellis/poles etc)
- Try to grow taller (and trellised plants) on the north side of the garden/rows/raised beds to avoid shading other plants
- Don't wait until Victoria day to start planting, many frost hearty vegetables can be started mid April to early May. They may take longer to germinate, but typically require little watering at this time of year to sprout.

Succession planting

- Greens Arugula, spinach, mesclun/salad mixes, lettuces with radishes and short season turnips
- After you pull garlic plant turnips, winter radish, short season beets (success will depend on the season), greens, and snow peas.
- If you are careful you can even plant in between rows a week or two ahead of removing mature plants.

Maintenance

Watering

When to water your garden

In the earlier season the time of day matters less. As plants begin to mature and sprout, in the morning is the best time. Ideally before the sun becomes strong on them.

When transplanting and germinating seeds in the garden, daily watering is ideal. As plants mature a deep watering every 2-4 days (depending on weather and how fast your soil dries out) will be sufficient. This encourages roots to grow a bit deeper and plants to more robust.

Mulching (shredded leaves, straw, etc) can also help to reduce the frequency and overall amount of water that needs to be applied to your garden.

When in doubt check the soil and look at your plants. If they are drooping they are in need of water and are stressed. If you dig down an inch or so into the soil you'll get a good indication as to how dry it actually is.

Hand watering

Pros

- Only waters what is needed
- Can easily use collected rain water
- Can control how much different plants get
- Requires nothing more than a hose and nozzle or a watering can

Cons

- Can become time consuming, even for small/medium sized gardens.
- Often less water is applied than you think, and growth can suffer
- If you go on vacation your garden may dry out, depending on how diligent your garden sitter is

Sprinklers/Soaker Hose

Pros

- All you have to do is turn on the tap to water the garden. This can easily be done in the morning as you get ready for work for example, as opposed to hand watering.
- Often provides a deep watering than by hand watering (especially for larger beds)

Cons

- A bit more expensive to set up
- Works better with larger beds than multiple small beds
- Requires more planning as to where to put plants suitable for soaker hose watering and plants suitable for sprinkler watering in grouped areas for effective watering (grouping like with like)

Timers

Can be used in conjunction with sprinklers and soaker hoses

Pros

- Can be programmed to run multiple zones automatically
- Will water your garden even if you forget, don't have time, or go on vacation

Cons

- Additional cost
- Can use extra water if you don't regularly adjust programming based on weather forecast and needs of plants throughout the season
- Can only be used in frost free portion of the season

Weeding and Thinning

Weeding is especially important in the first part of the season. During this time your plants are trying to establish themselves. Weeds will compete for water, sunlight, and nutrients. Also regularly weeding will prevent weeds from spreading and/or going to seed compounding the issue. Try to weed between rows (even with a hoe is fine) and around plants once a week, and do a deep weed a few times during the season. The most effective weeding removes as much root mass as possible, not just the tops, but try to avoid disturbing you plants.

Thinning is very important for proper plant development. Crowded plants (especially root vegetables) will not grow properly if too crowded. Follow seed packet for guidelines for thinning. You can cheat a bit with carrots by giving them an initial thin to half of the recommended spacing, and then to final spacing by harvesting every second carrot as they get large enough to eat. You can also use baby beet greens, and baby lettuce leaves for early salads.

Dealing with Pests

Animals

Fencing

The cost and effort of fencing a garden should be weighed against the actual damage that animals will do to the garden. Rabbits, deer, and groundhogs have a tendency to cause the most damage. Deterring these animals from the garden may prove to be much more time and cost effective.

Conventional Chicken wire/Hardware cloth

Pros

- Can help to exclude animals, especially when dug into ground

Cons

- Can create a barrier between gardener and garden
- Very difficult to weed around
- Many animals can still climb over fencing
- Can quickly become costly

Electric Fencing

Pros

- Will deter climbing animals
- Faster to set up than conventional fencing
- More cost effective for larger areas than conventional fencing
- Simple to reconfigure to meet changing needs

Cons

- Added cost to creating garden
- May not be suitable for gardens that children will frequent

Other ways to deter unwanted animals

Putting your garden near the house will often deter deer from coming too close. This typically less of an issue in town.

Dog fur among tender young plants. The scent from the hair helps to deter rabbits. You will periodically have to reapply it after it rains. Groomers are often happy to give you a bag of it for free and it will decompose in the garden.

Insects

Cucumber beetles

- Will eat cucumber, melon, zucchini, squash, pumpkin plants.
- Hand pick beetles ideally in morning when they are slower
- As plants begin vigorous growth beetle damage becomes negligible



Colorado potato beetles

- Hand pick or knock beetles/larvae off of potato plants into bucket of soapy water. Also check leaves for clusters of small orange eggs.
- While they prefer potatoes they will also eat eggplants
- Once a week is usually sufficient unless there are lots



Flea beetles

- Very small black beetles can be difficult to see. A good identifier is a 'shot hole' pattern in leaf damage
- They like to eat turnip, radish, rutabaga, and arugala.
- Too small and fast to pick
- You can apply diatomaceous earth on/around plants to help kill them as it dries them out. Reapply after rain.
- Damage is largely cosmetic except in severe cases or damage to very young plants



Japanese beetles

- Like to eat bean, raspberry and blackberry plants.
- Hand pick or knock into a bucket of soapy water once a week. In the morning when it is cool is best



Whitefly

- Will eat many garden plants, but seem to prefer tomatoes and peppers
- look for yellowing leaves, small clouds of tiny white flies that quickly fly away when you approach a plant
- Apply soapy water to plants or dust with diatomaceous earth.



Cabbage moth caterpillars

- Will eat Cabbage, Kale, broccoli, cauliflower, brussels sprouts.
- Caterpillars typically light green, but will tend to take on colour of their food source making them harder to spot. Leaf damage and green droppings are a good indication on where to start looking
- Hand pick once a week into soapy water.
- Row cover can be used to exclude moths from laying eggs on plants



Slugs

- Hand pick into bucket of soapy water
- If you have boards in your garden for walking between rows, check underneath during the day for them hiding



Tomato hornworm

- Eats tomato plants
- Despite their large size they can be hard to spot. If you see an area on a tomato plant that has been defoliated take a close look and remove caterpillar.
- If they are covered in white eggs, leave them. They have been attacked by a parasitic wasp and the larvae will feed on the caterpillar and continue the life cycle of a beneficial insect that is providing natural pest control in your garden.



Preventing Fungal Disease on Plants

There are a few things you can do to minimize fungal diseases that occur on plants. Some seasons however are worse than others and you may still have issues no matter what you do.

If you can situate your garden so that it receives morning light, the sun will dry the dew from plant leaves earlier in the day.

Employ as broad a crop rotation as you can. Ideally avoid planting in the same location for 3-4 years if possible. This is less of an issue for leafy greens and herbs.

Don't over crowd your plants. Make sure there is room for air to flow between and through them. Don't be afraid to prune them, especially tomatoes.

Mulching plants can reduce fungal disease from soil borne spores (such as tomato blight)

End of Season Care

The best time to prepare your garden for spring is in the fall. The soil will be drier and you don't need to worry about compacting it as much as you do in the spring. It will also help you to get an earlier start to your season.

- Remove dead plants, weeds etc. Do not put diseased plants in compost that you intend to use in the garden
- Dig in existing mulch to break down in soil
- Plant and mulch garlic in mid October
- Top dress with manure
- Seed a couple of rows of spinach and lettuce. This will often start in it's own time in the spring with little or no attention and provide some early greens.